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COMPRESSIVE STRENGTH OF MASONRY MORTAR CUBES

IS: 516-1959 (Method of tests for strength of Concrete C1.5) | Date: 22-10-2022

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Casting	19-10-2022
Sample Type	Building Inside Plasting
Sample Type/Size	70.06x70.06x70.06 mm
Date of Test	22-10-2022
Location	

Grade of Mortar :- 1:6 inside 3 days compressive strength

Cube No.	Cube Weight (g)	Cube Volume (cc)	Density of Cube (g/cc)	Load (kN)	Area of Cube (mm^2)	Strength of Cube (N/mm^2)	Average Strength of Cubes (N/mm^2)
	A	B	C = (A/B)	D	E	F = (D/E)*1000	
1	830	352	2.36	155	4.9	31.6	31.3 N/mm2
2	825	352	2.34	145	4.9	29.6	
3	835	352	2.37	160	4.9	32.7	

Remarks : Test result found satisfactory

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COMPRESSIVE STRENGTH OF MASONRY MORTAR CUBES

IS: 516-1959 (Method of tests for strength of Concrete C1.5) — Date: 26-10-2022

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Casting	19-10-2022
Sample Type	Building Inside Plasting
Sample Type/Size	70.06x70.06x70.06 mm
Date of Test	26-10-2022
Location	

Grade of Mortar :- 1:6 inside7 days compressive strength

Cube No.	Cube Weight (g)	Cube Volume (cc)	Density of Cube (g/cc)	Load (kN)	Area of Cube (mm^2)	Strength of Cube (N/mm^2)	Average Strength of Cubes (N/mm^2)
	A	B	C = (A/B)	D	E	F = (D/E)*1000	
1	920	352	2.61	190	4.9	38.8	39.8 N/mm2
2	930	352	2.64	195	4.9	39.8	
3	935	352	2.66	200	4.9	40.8	

Remarks : Test result found satisfactory

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COMPRESSIVE STRENGTH OF MASONRY MORTAR CUBES

IS: 516-1959 (Method of tests for strength of Concrete C1.5)

Date: 16-11-2022

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Casting	19-10-2022
Sample Type	Building Inside Plasting
Sample Type/Size	70.06x70.06x70.06 mm
Date of Test	16-11-2022
Location	
Grade of Mortar :-	1:6 inside 28 days compressive strength

Cube No.	Cube Weight (g)	Cube Volume (cc)	Density of Cube (g/cc)	Load (kN)	Area of Cube (mm^2)	Strength of Cube (N/mm^2)	Average Strength of Cubes (N/mm^2)
	A	B	C = (A/B)	D	E	F = (D/E)*1000	
1	1020	352	2.90	280	4.9	57.1	57.5 N/mm2
2	1010	352	2.87	275	4.9	56.1	
3	990	352	2.81	290	4.9	59.2	

Remarks : Test result found satisfactory

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IS: 516-1959 (Method of tests for strength of Concrete C1.5) | Date: 22-10-2022

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Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Casting	19-10-2022
Sample Type	Building Outside Plasting
Sample Type/Size	70.06x70.06x70.06 mm
Date of Test	22-10-2022
Location	

Grade of Mortar :- 1:4 Outside 3 days compressive strength

Cube No.	Cube Weight (g)	Cube Volume (cc)	Density of Cube (g/cc)	Load (kN)	Area of Cube (mm^2)	Strength of Cube (N/mm^2)	Average Strength of Cubes (N/mm^2)
	A	B	C = (A/B)	D	E	F = (D/E)*1000	
1	820	352	2.33	140	4.9	28.6	29.6 N/mm2
2	815	352	2.32	145	4.9	29.6	
3	825	352	2.34	150	4.9	30.6	

Remarks : Test result found satisfactory

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COMPRESSIVE STRENGTH OF MASONRY MORTAR CUBES

IS: 516-1959 (Method of tests for strength of Concrete C1.5) | Date: 26-10-2022

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Casting	19-10-2022
Sample Type	Building Outside Plasting
Sample Type/Size	70.06x70.06x70.06 mm
Date of Test	26-10-2022
Location	

Grade of Mortar :- 1:4 Outside 7 days compressive strength

Cube No.	Cube Weight (g)	Cube Volume (cc)	Density of Cube (g/cc)	Load (kN)	Area of Cube (mm^2)	Strength of Cube (N/mm^2)	Average Strength of Cubes (N/mm^2)
	A	B	C = (A/B)	D	E	F = (D/E)*1000	
1	915	352	=E17B17/C17	180	4.9	36.7	38.4 N/mm2
2	930	352	2.64	195	4.9	39.8	
3	940	352	2.67	190	4.9	38.8	

Remarks : Test result found satisfactory

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COMPRESSIVE STRENGTH OF MASONRY MORTAR CUBES

IS: 516-1959 (Method of tests for strength of Concrete C1.5) | Date: 16-11-2022

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Casting	19-10-2022
Sample Type	Building Outside Plasting
Sample Type/Size	70.06x70.06x70.06 mm
Date of Test	16-11-2022
Location	

Grade of Mortar :- 1:4 Outside 28 days compressive strength

Cube No.	Cube Weight (g)	Cube Volume (cc)	Density of Cube (g/cc)	Load (kN)	Area of Cube (mm^2)	Strength of Cube (N/mm^2)	Average Strength of Cubes (N/mm^2)
	A	B	C = (A/B)	D	E	F = (D/E)*1000	
1	970	352	2.76	270	4.9	55.1	54.1 N/mm2
2	985	352	2.80	265	4.9	54.1	
3	980	352	2.78	260	4.9	53.1	

Remarks : Test result found satisfactory

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Test Report of Fine Aggregate

IS: 383-2016, IS: 2386 (Part-1, 3)-1963 (Reaffirmed-2012) Date: ~~3/9/22~~ 9/3/2022

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Sample Type	Fine Aggregate
Date of Test	~~9/3/2022~~ 3/9/2022

Total wt of the sample (gms): 1000

IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per IS: 383-2016			
					Grading Zone-1	Grading Zone-2	Grading Zone-3	Grading Zone-4
10	0	0	0.0	100	100	100	100	100
4.75	27	27	2.7	97.3	90-100	90-100	90-100	95-100
2.36	55	82	8.2	91.8	60-95	75-100	85-100	95-100
1.18	239	321	32.1	67.9	30-70	55-90	75-100	90100
600	205	526	52.6	47.4	15-34	35-59	60-79	80-100
300	203	729	72.9	27.1	5-20	8-30	12-40	15-50
150	191	920	92.0	8.0	0-10	0-10	0-10	0-15
PAN	80	1000	100.0	0.0	-	-	-	-

Result: The Tested Sample Conforms to Grading Zone-II

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Test Report of Coarse Aggregate

2/9/22

IS: 383-2016, IS: 2386 (Part-1, 3 & 4)-1963 (Reaffirmed-2012)	Date:	9/3/2022

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Sample Type	Coarse Aggregate
Date of Test	9/3/2022 3/9/22

Sieve Analysis (Particle Size Distribution) of 20mm Down Coarse Aggregate

Total wt of the sample (gms): 5000

IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per IS: 383-2016
40	0	0	0.0	100	100
20	245	245	4.9	95.1	90-100
10	2560	2805	56.1	43.9	20-55
4.75	2033	4838	96.8	3.2	0-10
PAN	162	5000	100.0	0.0	-

Remarks : Test result found satisfactory

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Test Report of Fine Aggregate

IS: 383-2016, IS: 2386 (Part-1, 3)-1963 | Date: ~~9/3/2022~~ 3/9/22

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Sample Type	Coarse Aggregate
Date of Test	~~9/3/2022~~ 3/9/2022

Physical Properties

Sl. No	Physical Properties	Result	Requirements as per IS: 386-2016
1	Flakines Index (%)	13.20	Combined Flakiness and Elongation Index ahall nor exceed 40% for uncrushed and crushed
2	Elongation Index (%)	12.6	
3	Specific Gravity	2.66	-
4	Bulk Density (Loose) (Kg/l)	1.54	-
5	Bulk Density (Composed) (Kg/l)	1.58	-
6	Water Absorption (%)	0.22	-
7	Aggregate Crushing Value (%)	24.50	Max 30% for Aggregates to be used in concrete for wearing surfaces, In case aggregate Crushing Value exceeds 30% then the test for 10% fines should be conducted for aggregate to be used in concrete oter tha for wearing surfaces
8	Aggregate Impact Value (%)	22.80	Max 30% for aggregate to be used in concrete for wearing surfaces, 45% for aggregate to be used in concrete other than for wearing surface.

Remarks :Test result found satisfactory

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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for steel) — 03-09-2022

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka
Contractor	Sri B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Sample Type	HSD Steel Bars (3 sets)
Sample Type/Size	
Sample Grade/ Age	
Date of Test	03-09-2022
Location	

Sl No.	Identification Mark	Gopala Fe-550		Ramaraj Fe-550	IS 1786 Requirements
TENSILE STRENGTH TEST					
1	DIAMETER (mm)	8.00	12.00	16.00	Fe - 550
2	AREA (mm²)	46.37	106.62	196.56	-
3	GAUGE LENGTH (mm)	38.47	58.34	79.21	-
4	YIELD LOAD (N)	25600.00	61400.00	110600	-
5	ULTIMATE LOAD (N)	31100.00	72000.00	131200	-
6	FINAL LENGTH (mm)	47.50	70.20	94.50	-
7	a. YIELD STRENGTH (N/mm²)	552.09	575.85	562.68	550 min.
8	b. ULTIMATE TENSILE STRENGTH (N/mm²)	670.70	675.27	667.48	a + 6% 585 min.
9	% ELONGATION	23.46	20.33	19.30	10 min.
10	FRACTURE	W.G.L	W.G.L	W.G.L	-
11	WEIGHT PER METER (Kg/m)	0.39	0.87	1.57	-
ANGLE OF BEND - 180°					
1	RESULT	PASS	PASS	PASS	-
REBEND TEST : ANGLE OF BEND - 135° ANGLE OF REBEND 157.5°					
1	RESULT	PASS	PASS	PASS	-

Remarks : Test result found satisfactory

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Physical properties of Coarse, Fine Aggregates and Cement

1	**Coarse Aggregates:**			
	Source of Aggregates		GCS Crusher	
	Specific Gravity of 20mm agg		2.700	
	Specific Gravity of 10mm agg		2.683	
	Water Absorption of 20mm agg.		0.40	%
	Water Absorption of 10mm agg.		0.51	%
	Gradation (Individual)		OK	as confirm to IS: 383
	Gradation (Combined)		OK	as confirm to IS: 383
	Aggregate Impact Value		19.2	%
	Los Angles abrasion Value	Gr."B"	24.9	%
		Gr."C"	33.5	%
	Flakiness Index		11.1	%
	Elongation Index		12.3	%
	Combined FI & EI		23.4	%
	Soundness of C.Aggregate			
	By (Na2So4)		0.11	%
	By (MgSo4)		0.24	%
2	**Fine Aggregates:**			
	Source of Fine Aggregates		GCS Crusher	
	Specific Gravity of Fine Aggregates		2.609	
	Water Absorption of Fine Aggregates		1.58	%
	Gradation		OK	confirm to Zone-II as per IS: 383
3	**Cement:**			
	Source of Cement / Make		ACC - 53 Grade	

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PROPOSED (M25 - RCC) CONCRETE JOB MIX FOR STRUCTURAL WORK

1	**Design Stipulations**			
a)	Characteristic compressive strength Required in the field of 28 days	25	N/mm^2	
b)	Max. size of aggregate	20	mm	
c)	Degree of workability	50 – 75	mm	
d)	Degree of Quality Control	(0.90 Compacting Factor) Good		
e)	Type of exposure	Normal		
f)	Min. Cement Content for RCC	310	Kg/Cu.m	
2	**Test Data for Materials :**			
a)	Cement	OPC - 53 Grade		
b)	Sp.gr of Cement	3.15		
c)	Sp.gr of Coarse aggregate	2.692		
d)	Sp.gr of Fine aggregate	2.609		
e)	Water absorption of Coarse Aggregate	0.46	%	
f)	Water absorption of Fine Aggregate	1.58	%	
g)	Water	Potable	Source	BoreWell at V2 Lab

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4 **Target Mean Strength of Concrete**

For a tolerance factor of 1.65 and working table 1 of IS: 10262-2019, the Target Mean strength for the specified characteristic cube strength is 25 + 5.3 x 1.65 = 33.745 N/mm^2,
But according to MoRTH table No.1700-5, Target Mean Strength = 25+11 = 36 N/mm^2.

5 **Selection of Water cement Ratio**

From Fig (1) of IS: 10262-2019, the free W/c ratio required for the target mean strength of 36 N/mm^2 is 0.44. As perMoRTH Table No.1700-3, the suggested W/c ratio for RCC for Normal exposure condition is 0.45. We are start the trial from lower W/c ratio.

0.44

6 **Selection of water and sand content**

From table – 4 of IS: 10262-2019, for 20mm nominal max.size aggregate and fine aggregate conforming to Zone – II, water content per cubic meter of concrete 186
and fine aggregate content as % of total aggregate by absolute volume = 35

For change in values of water and sand content with respect to condition, the following adjustment is required. From IS: 10262 – Table – 6.(Clause 3.3.2)

Change in condition	Adjustment Required in	
	water content percent	Percentage sand in Total aggregate
For Sand conforming to grading of Table 4 of IS:383-1970	0	For Zone-I=+1.5%, for Zone-II=0%, for Zone-III=-1.5% & Zone-IV=-3%
Zone -II	0	0
Increase or Decrease in the value of Compacting factor by 0.1	+/- 3%	0
0.9 0.8	3	0
Each 0.05 increase or decrease in free water - cement Ratio	0	+/- 1%
0.6 0.44	0	-3.2
Total	3	-3.2

Therefore, required sand content as % of total aggregate by absolute volume =
35 -3.2 31.8 %(Increased upto 34% for All in All Gradation)
Required water content = 191.58 lt/m^3

7 **Determination of Cement content**

Water cement ratio = 0.44

Water = 191.58 Lt.

Cement = 435 Kg.

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Note: As per the MOSRTH Clause 1703, the Cement content shall be as low as possible but not less than the specified quantities. In no case shall it exceed 540 kg/cum of concrete.

As per the above note, and visual observations of mixes, we are start the trials with minimum water cement ratio = 0.44
And conduct the trials accordingly.

Trial : 1	Water Cement Ratio =	0.44
	Sand content as % of total agg. by absolute volume = p	34
	(All in all gradation satisfactory)	
Trial : 2	Water Cement Ratio =	0.44
	Sand content as % of total agg. by absolute volume = p	34
	(Cohesive & All in all gradation satisfactory)	

Determination of Coarse and Fine aggregate contents from the following formulas

For F.A calculations $V = [W + C/Sc + 1/p\ (fa/Sfa)] \times 1/1000$

For C.A calculations $V = [W + C/Sc + 1/(1-p)\ (ca/Sca)] \times 1/1000$

Where,

V = Absolute volume of fresh concrete, which is equal to gross volume (cu.m) minus the volume of entrapped air.

W = Mass of water, kg/cu.m

C = Mass of cement, kg/cu.m

p = Ratio of fine aggregate to total aggregate by absolute volume

fa = Total mass of fine aggregate, kg/cu.m

ca = Total mass of coarse aggregate, kg/cu.m

Sfa = Specific Gravity of saturated surface dry of fine aggregate

Sca = Specific Gravity of saturated surface dry of coarse aggregate

Fa= (980-150-340/3.15)*(0.34*2.609)

Fa 640.5136 Say 641 kg

Ca= (980-150-340/3.15)*(1-0.34)/100*2.692)
1282.905 Say 1283 kg

20 mm	55%	705.65	Say 706 kg
10 mm	45%	577.35	Say 577 kg

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BATCH WEIGHTS (SSD Condition)

Quantities per cum of conctrete (Kg/Cum.)

Ingrediants	T - 1	T - 2				
Water Cement Ratio	0.44	**0.44**				
Water	141	**150**				
Cement	320	**340**				
F.A (Sand)	654	**641**				
C.A (Combined)	1310	**1283**				
20mm Fraction (55%)	720	**706**				
10mm Fraction (45%)	590	**577**				
Admixture(0.8% by wt of Cement)	**2.56**	**2.72**				
Observations						
Visual observation of mix	Cohesive	**Cohesive**				
Intial Slump	85 mm	**105 mm**				
Slump at after 15min	70 mm	**88 mm**				
Slump at after 30min	60 mm	**76 mm**				
Slump at after 45min	40 mm	**67 mm**				
7 Days Strength	21.3	**21.9**				
28 Days Strength	27.5	**29.1**				
Mix Proportion						
Water Cement Ratio	0.44	**0.44**				
Cement	1.00	**1.00**				
Fine Aggregates	2.04	**1.89**				
Coarse Aggregates	4.09	**3.77**				

Actual quantities required for the mix per cu.m

Corrections						
Extra quantity of water to added for absorption in case of CA at 0.46% by mass	6.03	5.90				
Extra quantity of water to added for absorption in case of fA at 1.58% by mass	10.33	10.13				
Water	157	**166**				
Cement	320	**340**				
F.A (Sand)	644	**631**				
20mm Fraction (55%)	717	**702**				
10mm Fraction (45%)	587	**575**				
Mix Proportion						
Water Cement Ratio	0.49	**0.49**				
Cement	1.00	**1.00**				
Fine Aggregates	2.01	**1.86**				
Coarse Aggregates	4.08	**3.76**				

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Proposal Job Mix for M25 (RCC) for structural works

Based on the above observations and Trial mixtures, we are proposed the Job Mix for M25 (RCC) for structural works are as follows:

Ingrediants	Weight / Cum		Ratio	
	SSD Condition	Dry Condition	SSD	Dry
Water (lt)	150	166	0.44	0.49
Cement (kg)	340	340	1.00	1.00
F.A (Sand) (kg)	641	631	1.89	1.86
C.A (Combined) (kg)	1283	1277	3.77	3.76
20 mm Fraction (kg)	706	702	2.08	2.06
10 mm Fraction (kg)	577	575	1.70	1.69
Admixture 0.8% by wt of cement (kg)	2.72	2.72	0.008	
Visual Observation of Mix	Cohesive			
Intial Slump (mm)	105 mm			
Slump at after 15 min.(mm)	88 mm			
Slump at after 30 min.(mm)	76 mm			
Slump at after 45 min.(mm)	67 mm			
7 Days Comp. Strength(N/mm^2)	28.9			
28 Days Comp. Strength(N/mm^2)	39.1			

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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5) | Date: 06-10-2022

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	30-09-2022
Sample Type	Column Concrete(Building Work 2nd Floor)
Sample Type/Size	150x150x150 mm
Sample Grade/ Age	M25/ 07 Days Compressive Strength
Date of Test	06-10-2022
Location	

Sl No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Maximum Load in	Compressive Strength	Average Compressive Strength
					mm	Sq.mm	KN	N/mm^2	N/mm^2
1	Column	M25	30-09-2022	06-10-2022	150x150x150	22500	499.00	22.18	23.13
2	Column	M25	30-09-2022	06-10-2022	150x150x150	22500	560.00	24.89	
3	Column	M25	30-09-2022	06-10-2022	150x150x150	22500	502.30	22.32	

Remarks : Test result found satisfactory

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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5) | Date: 27-10-2022

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	30-09-2022
Sample Type	Column Concrete(Building Work 2nd Floor)
Sample Type/Size	150x150x150 mm
Sample Grade/ Age	M25/ 28 Days Compressive Strength
Date of Test	27-10-2022
Location	

Sl No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Maximum Load in	Compressive Strength	Average Compressive Strength
					mm	Sq.mm	KN	N/mm^2	N/mm^2
1	Column	M25	30-09-2022	27-10-2022	150x150x150	22500	766.50	34.07	28.47
2	Column	M25	30-09-2022	27-10-2022	150x150x150	22500	561.10	24.94	
3	Column	M25	30-09-2022	27-10-2022	150x150x150	22500	593.80	26.39	

Remarks : Test result found satisfactory

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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5)	Date:	14-10-2022

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	08-10-2022
Sample Type	Buildings Lintel 2nd Floor
Sample Type/Size	150x150x150 mm
Sample Grade/ Age	M25/ 07 Days Compressive Strength
Date of Test	14-10-2022
Location	

Sl No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Maximum Load in	Compressive Strength	Average Compressive Strength
					mm	Sq.mm	KN	N/mm²	N/mm²
1	Lintel	M25	08-10-2022	14-10-2022	150x150x150	22500	477.00	21.20	21.16
2	Lintel	M25	08-10-2022	14-10-2022	150x150x150	22500	501.00	22.27	
3	Lintel	M25	08-10-2022	14-10-2022	150x150x150	22500	450.00	20.00	

Remarks : Test result found satisfactory

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Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5)	Date:	04-11-2022

Name of Work :"Construction of Additional Class Rooms at Yelahanka Government PU College in Kempegowda Ward 01"

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. B B Umesh
Customer Reference	BBMP/EE/YNK.D/EPMT-14/AG/07/2022-23
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	08-10-2022
Sample Type	Buildings Lintel 2nd Floor
Sample Type/Size	150x150x150 mm
Sample Grade/ Age	M25/ 28 Days Compressive Strength
Date of Test	04-11-2022
Location	

Sl No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Maximum Load in	Compressive Strength	Average Compressive Strength
					mm	Sq.mm	KN	N/mm²	N/mm²
1	Lintel	M25	08-10-2022	04-11-2022	150x150x150	22500	590.10	26.23	25.28
2	Lintel	M25	08-10-2022	04-11-2022	150x150x150	22500	550.00	24.44	
3	Lintel	M25	08-10-2022	04-11-2022	150x150x150	22500	566.60	25.18	

Remarks : Test result found satisfactory

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